

Work Order ID 66966 - 1

Thursday, March 03, 2011 8:58:49 AM

Page 1

Item ID: D6101-005

Accept

Setup Start

Revision ID:

Stop

Item Name: Saddle Billet

Start Date: 3/3/2011 Start Qty: 30.00

Cust Item ID:

Required Date: 3/16/2011 Req'd Qty: 30.00

Customer:

Reference:

Run Start

Approvals:

Process Plan:

Date: 11/03/03

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

Draw Nbr

Revision Nbr

D6101

Rev B

100

0.00



Purchasing

Purchasing

PURCHASING

Memo

0.00

Issue P/O:

13604

a) Description: Alluminum billet

b) 5.00" x 8.250" x 2.50" thick

c) Tolerance on all dimensions are +0.030"/-0.000"

d) Grain direction along 5.00" length

e) Material: 7075-T7351 (QQ-A-250/12)

f) Material certification required

CZ 11/03/03 (30)

110

Receive & Inspect for Damage & Mat'l Certs

0.00



Packaging

Packaging

Memo

0.00

Ensure material certification is attached

C4/3/11 (20)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

# Work Order ID 66966

Thursday, March 03, 2011 8:58:49 AM



Page 2

Item ID: D6101-005

Accept



Setup Start



Revision ID:

Stop



Item Name: Saddle Billet

Start Date: 3/3/2011 Start Qty: 30.00



Cust Item ID:

Required Date: 3/16/2011 Req'd Qty: 30.00



Customer:

Reference:

Run Start



Approvals: Process Plan: Date: Tooling: Date:

Stop



QC: Date: SPC (Y/N): Date:

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

120

QC6- Inspect dimensions to drawing

0.00



QC

Memo

0.00

*MR 11/03/10*

*20*

*0*

Quality Control

Ensure Material certification comply to Dwg D6101

130

Identify as per dwg & Stock Location: *MAT*

0.00



Packaging

Memo

0.00

*MR 11/03/10*

*20*

*0*

Packaging

140

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

*11/3/10*  
*MR*  
*11-03-10*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

# Picklist Print

Page 1

Thursday, March 03, 2011 8:58:45 AM

Work Order ID: 66966



Parent Item: D6101-005



Parent Item Name: Saddle Billet


Start Date: 3/3/2011

Required Date: 3/16/2011

Start Qty: 30.00

Required Qty: 30.00

Comments: IPP A: ☐01.05.04 ☐New Issue ☐EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6101-005P  7075-T7351 8.25X5.0X2.5		Purchased	No			110	Each	0.0000	1 	30		3/4/3/2 (2)	



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

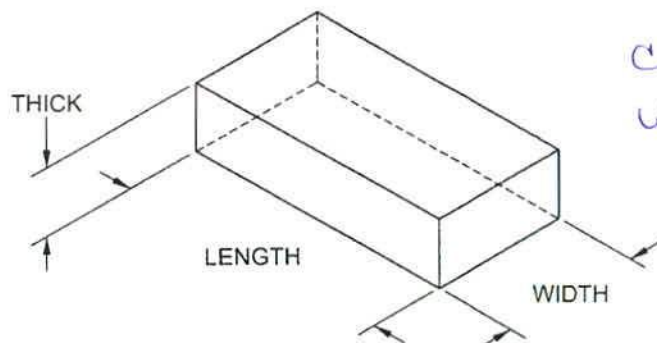
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

# SPECIFICATION CONTROL DRAWING



CL 1110303  
W10: 669666

PURCHASE MATERIAL ACCORDING TO THE FOLLOWING TABLE. SPECIFY ALLOY, LENGTH x WIDTH x THICK (+0.030/-0.000), AND GRAIN DIRECTION AS SHOWN.

TOLERANCES ON ALL DIMENSIONS ARE +0.030/-0.000.

ALL DIMENSIONS ARE IN INCHES.

△ ACCEPTABLE SPECIFICATIONS FOR 7075-T7351 ALUMINUM ARE AMS-QQ-A-250/12, QQ-A-250/12, OR ASTM B209

Part No.	Alloy	Length	Width	Thick	Grain Direction
D6101-001	7075-T7351 (QQ-A-250/12)	6.000	6.250	2.000	Along 6.000 Length
D6101-003	7075-T7351 (QQ-A-250/12)	7.875	6.250	2.000	Along 7.875 Length
D6101-005	7075-T7351 (QQ-A-250/12)	5.000	8.250	2.500	Along 5.000 Length
D6101-007	7075-T7351 (QQ-A-250/12)	7.750	8.250	2.500	Along 7.750 Length
D6101-009	7075-T7351 (QQ-A-250/12)	8.700	8.250	2.500	Along 8.700 Length
D6101-011	7075-T7351 (QQ-A-250/12)	9.700	8.250	2.500	Along 9.700 Length
D6101-013	7075-T7351 (QQ-A-250/12)	10.100	8.250	2.500	Along 10.10 Length
D6101-015	7075-T7351 (QQ-A-250/12)	9.450	6.250	2.500	Along 9.450 Length
D6101-017	7075-T7351 (QQ-A-250/12)	6.350	6.250	2.250	Along 6.350 Length

△ B

RELEASED  
09/07/15/WB

B	ADDED D6101-015/-017, ADD ASTM B209	RF	09.04.23
A	NEW ISSUE	CP	01.03.30
REV.	DESCRIPTION	BY	DATE
DESIGN	CP	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>[Signature]</i>	D6101	SHEET 1 OF 1
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	SADDLE BILLET, 7075	NTS
DATE	09.04.23	COPYRIGHT © 2001 BY DART AEROSPACE LTD <small>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	



**Castle Metals®**

A. M. Castle &amp; Co.

**BORDEREAU DE MARCHANDISES**

Page 1 of 2

No de Formulaire d'Emballage / Shipment No: 711655

<b>Expédié de / Ship From:</b> Castle Metals MONTREAL 835-SELKIRK AVENUE POINTE CLAIRE, QUEBEC H9R 3S2		<b>Vendu à / Sold To:</b> DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7		<b>Expédié à / Ship To:</b> WILL CALL-MONTREAL 835 SELKIRK AVENUE POINTE CLAIRE, QC H9R 3S2		<b>Livré à / Deliver To:</b> WILL CALL-MONTREAL 835 SELKIRK AVENUE POINTE CLAIRE, QC H9R 3S2 CA	
<b>Date d'expédition / Date Shipped</b> 04-MAR-11	<b>F.O.B.</b> ORIGIN	<b>Modalités de transport / Freight Terms</b> Prepaid	<b>Transporteur / Carrier</b> MANITOULIN		<b>N° du Bon de connaissance / BOL No</b> 711655-2		

<b>Détails d'expédition / Shipment Details</b>	<b>Destination finale / Final Destination Branch - MON</b>
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<b>N° de commande / Order No</b> 1261965	<b>N° de ligne / Line No</b> 1	<b>N° d'article / Item No</b> 752241.MO	<b>Description</b> 2.5000.PL.7075.T7351.ALUMINUM.US1.48.5000.144.5000 CUT 2SIDED TO 8.25 IN ( + .0310/- .0000 IN (GRAIN TO RUN ALONG 5")) X 5 IN ( + .0310/- .0000 IN (GRAIN TO RUN ALONG 5")) - ALUMINUM PLATE SAW SPECIFICATIONS: QQ-A-250/12				
<b>N° de bon de commande / Purchase Order No</b> <del>PER RELEASE</del> 13604		<b>Nbre de pièces / Part Number</b> YOUR ITEM NUMBER: D6101-005	<b>Qté commandée / Ordered Qty</b> 20 PCS		<b>Qté Facturée / Invoice Qty</b> 20 PCS		
<b>Détails / Details</b> DO NOT SHIP - HOLD UNTIL ADVISED							
<b>N° de livraison / Delivery No :</b>	<b>Usine / Mill</b>	<b>No de coulée / Heat Number</b>	<b>Code méc / Mech Id</b>	<b>Pièces / PCS</b>	<b>Largeur (Pouce) / Width (IN)</b>	<b>Longueur (Pouce) / Length (IN)</b>	<b>Qté expédiée / Shipped Qty (LBS)</b>
69849307		479742A9		4			42.66
69849307		479610A8		16			170.65

Ces marchandises/technologies sont sujettes aux règlements de l'Export Administration et du département d'état des États-Unis. Si elles ont été/sont exportées, elles doivent se conformer à ces règlements. Toute modification du contrat de transport contraire aux lois des États-Unis est interdite.

These commodities/technologies are subject to US Export Administration & US State Dept. Regulations and, if intended for export, were/are exported thereunder. Diversion contrary to US Law is Prohibited.

Nous certifions par la présente que le matériel couvert par cette certification est conforme aux spécifications susmentionnées et aux exigences applicables pour le matériel, y compris toute spécification faisant partie de la description. Les rapports d'essai sont archivés pour fins de consultation. Toute requête concernant du matériel défectueux sera rejetée à moins qu'elle ne soit faite par écrit à A. M. Castle & Co. dans les 60 jours suivant la livraison. Le matériel coupé sur mesure ou coupé par le client ne peut être retourné pour crédit.

We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material cut to the correct size, or material cut by the customer cannot be returned.

Date Printed: 03/04/2011 04:07:54 PM

*Handwritten signature*  
11/03/10



**KAISER  
ALUMINUM****CERTIFIED TEST REPORT**

Trentwood Works - Spokane, WA 99215  
Phone: (800) 367-2586

Serial Number  
4172642

Lot: 479709A8 Cast 268

Drop 10

Ingot 2

(ASTM E8/B557)  
(EN 2002-1)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T7351	LT / 2 (Min:Max)	71.5 : 71.9 (493 : 496)	59.8 : 60.2 (412 : 415)	10.7 : 10.8

(ASTM E1004)  
(EN 2004-1)

Conductivity %IACS :	40.8 Min	41.3 Max
(MS/M) :	23.7 Min	24.0 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.10	0.20	1.5	0.04	2.4	0.20	5.6	0.03	0.01	0.01	TOT 0.05

Lot: 479742A9 Cast 271

Drop 09

Ingot 4

(ASTM E8/B557)  
(EN 2002-1)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T7351	LT / 2 (Min:Max)	69.4 : 74.8 (479 : 516)	56.4 : 63.9 (389 : 441)	11.1 : 11.7

(ASTM E1004)  
(EN 2004-1)

Conductivity %IACS :	38.3 Min	40.9 Max
(MS/M) :	22.2 Min	23.7 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.10	0.20	1.5	0.04	2.5	0.19	5.6	0.03	0.01	0.02	TOT 0.05

*OK*  
11/03/10

**KAISER  
ALUMINUM****CERTIFIED TEST REPORT**

Trentwood Works - Spokane, WA 99215  
Phone: (800) 367-2586

Serial Number  
4172642

Lot: 485604A3 Cast 271 Drop 23 Ingot 2

(ASTM E8/B557)  
(EN 2002-1)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T7351	LT / 2 (Min:Max)	71.8 : 72.0 (495 : 496)	59.9 : 60.4 (413 : 416)	10.6 : 10.9

(ASTM E1004)  
(EN 2004-1)

Conductivity %IACS :	41.3 Min	41.3 Max
(MS/M) :	24.0 Min	24.0 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.11	0.21	1.5	0.04	2.5	0.20	5.6	0.04	0.01	0.01	TOT 0.05

Lot: 485622A5 Cast 271 Drop 19 Ingot 2

(ASTM E8/B557)  
(EN 2002-1)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T7351	LT / 2 (Min:Max)	70.9 : 71.0 (489 : 490)	59.1 : 59.5 (407 : 410)	11.3 : 11.3

(ASTM E1004)  
(EN 2004-1)

Conductivity %IACS :	40.6 Min	41.9 Max
(MS/M) :	23.5 Min	24.3 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.10	0.21	1.5	0.04	2.4	0.19	5.5	0.04	0.01	0.01	TOT 0.05

11/03/10  
C.R.

**KAISER  
ALUMINUM**

Trentwood Works - Spokane, WA 99215

Phone: (800) 367-2586

**CERTIFIED TEST REPORT**

Serial Number

4172642

**TEST NOTES**

7075-T7351 plate 3.501-4.000" thick, if  
ultrasonically inspected, meets requirements of CMMP025 per  
SDR CMMP025-KaiserT-3. 7075-T7351 plate 4.001-5.000" thick,  
if ultrasonically inspected, meets requirements of CMMP025  
per  
SDR CMMP025-KaiserT-2.

Metal represented by this test report was immersion  
ultrasonically tested from one side and meets the Class A  
and Class B requirements of all specifications referenced  
on this test report.

**CERTIFICATION**

KAISER ALUMINUM FABRICATED PRODUCTS, LLC (KAISER) HEREBY CERTIFIES THAT METAL SHIPPED UNDER THIS ORDER WAS MELTED IN THE UNITED STATES OF AMERICA OR A QUALIFYING COUNTRY PER DFARS 225.872-1(a), WAS MANUFACTURED IN THE UNITED STATES OF AMERICA, AND MEETS THE REQUIREMENTS OF DFARS 252.225 FOR DOMESTIC CONTENT. THIS MATERIAL HAS BEEN INSPECTED, TESTED, AND FOUND IN CONFORMANCE WITH THE REQUIREMENTS OF THE APPLICABLE SPECIFICATIONS AS INDICATED HEREIN. ALL METAL WHICH IS SOLUTION HEAT TREATED COMPLIES WITH AMS 2772. ANY WARRANTY IS LIMITED TO THAT SHOWN ON KAISER'S STANDARD GENERAL TERMS AND CONDITIONS OF SALE. TEST REPORTS SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF KAISER ALUMINUM FABRICATED PRODUCTS, LLC LABORATORY. THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW. ISO-9001:2000 CERTIFIED.

**BILL POYNOR, LABORATORIES SUPERVISOR**



**Castle Metals®**

A. M. Castle &amp; Co.

**BORDEREAU DE MARCHANDISES**

Page 1 of 2

No de Formulaire d'Emballage / Pack Slip No: 573954

<b>Expédié de / Ship From:</b>		<b>Vendu à / Sold To:</b>		<b>Expédié à / Ship To:</b>		<b>Livré à / Deliver To:</b>	
Castle Metals Wichita East 3050 S Hydraulic Wichita, KS 67216		DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7		WILL CALL-MONTREAL 835 SELKIRK AVENUE POINTE CLAIRE, QC H9R 3S2			
<b>Date d'expédition / Date Shipped</b>	<b>F.O.B.</b>	<b>Modalités de transport / Freight Terms</b>		<b>Transporteur / Carrier</b>	<b>N° du Bon de connaissance / BOL No</b>	<b>N° de livraison / Delivery No</b>	
04-MAR-11	ORIGIN	Prepaid		CASTLE_NETWORK K	577407	69849307	

<b>Détails d'expédition / Shipment Details</b>	<b>Destination finale / Final Destination Branch -</b>
--	--

<b>N° de commande / Order No</b>	<b>N° de ligne / Line No</b>	<b>N° d'article / Item No</b>	<b>Description</b>		
1261965	1	752241.MO	2.5000.PL.7075.T7351.ALUMINUM.USI.48.5000.144.5000 CUT 2SIDED TO 8.25 IN ( + .0310/- .0000 IN (GRAIN TO RUN ALONG 5")) X 5 IN ( + .0310/- .0000 IN (GRAIN TO RUN ALONG 5")) - ALUMINUM PLATE SAW SPECIFICATIONS: QQ-A-250/12		
<b>N° de bon de commande / Purchase Order No</b>	<b>Nbre de pièces / Part Number</b>		<b>Qté commandée / Ordered Qty</b>	<b>Qté Facturée / Invoice Qty</b>	<b>Solde à livrer / Backorder Qty</b>
PER RELEASE 13604	YOUR ITEM NUMBER: D6101-005		20 PCS	20 PCS	

<b>Détails / Details</b>						
<b>Usine / Mill</b>	<b>No de coulee / Heat Number</b>	<b>Code mec / Mech Id</b>	<b>Pièces / PCS</b>	<b>Largeur (Pouce) / Width (IN)</b>	<b>Longueur (Pouce) / Length (IN)</b>	<b>Qté expédiée / Shipped Qty (LBS)</b>
	479610A8		16			170.65
	479742A9		4			42.66

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We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material cut to the correct size, or material cut by the customer cannot be returned for credit.

aml  
11/03/10



**Castle Metals®**

A. M. Castle & Co.

## BORDEREAU DE MARCHANDISES

Page 2 of 2

Ce matériel a été reçu et inspecté par: This material has been received and inspected by:		Date:	
--	--	-------	--

SHIP TO: CASTLE % CASTLE AEROSPACE 3050 SOUTH HYDRAULIC WICHITA, KS 67218		<b>KAISER ALUMINUM</b> Trentwood Works - Spokane, WA 99215 Phone: (800) 367-2586 <b>CERTIFIED TEST REPORT</b>	
SOLD TO: CAS AERO%AM CASTLE METALS ATTN: BOB OHR %ACCTS PAYABLES 3400 NORTH WOLF ROAD FRANKLIN PARK, IL 60131		Serial Number 4172642	
CUSTOMER PO NUMBER: 15132	WORK PACKAGE:	CUSTOMER PART NUMBER: 6879 AMC A97075-60	SHIP RUN/LOAD ID: 101838/5
KAISER ORDER NO: 1087324	LINE ITEM: 1	SHIP DATE: 29-SEP-2009	ALLOY: 7075
		CLAD: BARE	TEMPER: T7351
PRODUCT DESCRIPTION: Sawed Plate			
WEIGHT SHIPPED: 44926 LB	QUANTITY: 25 PCS EST.	B/L NUMBER: 2024216	GAUGE: 2.5000 IN
		DIAMETER/WIDTH: 48.500 IN	LENGTH: 144.500 IN

### Certified Specifications

AMS 4078/RevG  
ASTM B 209/Rev07  
BSS 7055/RevA  
DPS 4.713/RevAH  
GSS16100/RevG/Amd1

AMS-QQ-A-250/12  
ASTM B 594/Rev06  
CMMP 025/RevS  
EAC MS1011/RevE  
MMS 159/RevN

AMS-STD-2154  
BAC 5439/RevH  
CSTI 008/RevC  
GAMPS 9101/RevB  
PS 21211/RevK

Test Code: 4297

### Test Results

Lot: 479610A8 Cast 268

Drop 21

Ingot 2

(ASTM E8/B557)  
(EN 2002-1)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T7351	LT / 2 (Min:Max)	70.7 : 71.3 (487 : 492)	59.1 : 59.5 (407 : 410)	11.2 : 11.6

(ASTM E1004)  
(EN 2004-1)

Conductivity %IACS :	41.6 Min	42.0 Max
(MS/M) :	24.1 Min	24.4 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.09	0.18	1.6	0.03	2.4	0.20	5.8	0.04	0.01	0.01	TOT 0.05

11/03/10  
CJF



**KAISER  
ALUMINUM**Trentwood Works - Spokane, WA 99215  
Phone: (800) 367-2586**CERTIFIED TEST REPORT**Serial Number  
4172642

Lot: 479709A8 Cast 268

Drop 10

Ingot 2

(ASTM E8/B557)

(EN 2002-1)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T7351	LT / 2 (Min:Max)	71.5 : 71.9 (493 : 496)	59.8 : 60.2 (412 : 415)	10.7 : 10.8

(ASTM E1004)

(EN 2004-1)

Conductivity %IACS :	40.8 Min	41.3 Max
(MS/M) :	23.7 Min	24.0 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.10	0.20	1.5	0.04	2.4	0.20	5.6	0.03	0.01	0.01	TOT 0.05

Lot: 479742A9 Cast 271

Drop 09

Ingot 4

(ASTM E8/B557)

(EN 2002-1)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T7351	LT / 2 (Min:Max)	69.4 : 74.8 (479 : 516)	56.4 : 63.9 (389 : 441)	11.1 : 11.7

(ASTM E1004)

(EN 2004-1)

Conductivity %IACS :	38.3 Min	40.9 Max
(MS/M) :	22.2 Min	23.7 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.10	0.20	1.5	0.04	2.5	0.19	5.6	0.03	0.01	0.02	TOT 0.05

11/03/10  
C.R.

**KAISER  
ALUMINUM**Trentwood Works - Spokane, WA 99215  
Phone: (800) 367-2586**CERTIFIED TEST REPORT**Serial Number  
4172642

Lot: 485604A3 Cast 271 Drop 23 Ingot 2

(ASTM E8/B557)  
(EN 2002-1)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T7351	LT / 2 (Min:Max)	71.8 : 72.0 (495 : 496)	59.9 : 60.4 (413 : 416)	10.6 : 10.9

(ASTM E1004)  
(EN 2004-1)

Conductivity %IACS :	41.3 Min	41.3 Max
(MS/M) :	24.0 Min	24.0 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.11	0.21	1.5	0.04	2.5	0.20	5.6	0.04	0.01	0.01	TOT 0.05

Lot: 485622A5 Cast 271 Drop 19 Ingot 2

(ASTM E8/B557)  
(EN 2002-1)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T7351	LT / 2 (Min:Max)	70.9 : 71.0 (489 : 490)	59.1 : 59.5 (407 : 410)	11.3 : 11.3

(ASTM E1004)  
(EN 2004-1)

Conductivity %IACS :	40.6 Min	41.9 Max
(MS/M) :	23.5 Min	24.3 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.10	0.21	1.5	0.04	2.4	0.19	5.5	0.04	0.01	0.01	TOT 0.05

**KAISER  
ALUMINUM****CERTIFIED TEST REPORT**

Trentwood Works - Spokane, WA 99215  
Phone: (800) 367-2586

Serial Number  
4172642

Lot: 485626A6 Cast 271

Drop 23

Ingot 3

(ASTM E8/B557)  
(EN 2002-1)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T7351	LT / 2 (Min:Max)	71.2 : 71.8 (491 : 495)	59.4 : 60.1 (410 : 414)	10.1 : 11.0

(ASTM E1004)

(EN 2004-1)

Conductivity %IACS :	41.3 Min	41.4 Max
(MS/M) :	24.0 Min	24.0 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.11	0.21	1.5	0.04	2.5	0.20	5.6	0.04	0.01	0.01	TOT 0.05

Lot: 485646A4 Cast 271

Drop 29

Ingot 2

(ASTM E8/B557)  
(EN 2002-1)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T7351	LT / 2 (Min:Max)	70.9 : 74.0 (489 : 510)	59.4 : 63.4 (410 : 437)	11.3 : 11.7

(ASTM E1004)

(EN 2004-1)

Conductivity %IACS :	39.1 Min	41.6 Max
(MS/M) :	22.7 Min	24.1 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.09	0.18	1.4	0.04	2.4	0.20	5.7	0.03	0.01	0.01	TOT 0.05

**ALLOY LIMITS**

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER	MAX
7075 MIN	0.00	0.00	1.2	0.00	2.1	0.18	6.1	0.00	0.00	0.00	EACH	0.05
MAX	0.40	0.50	2.0	0.30	2.9	0.28	6.1	0.20	0.05	0.05	TOT	0.15

Aluminum Remainder



**KAISER  
ALUMINUM**

Trentwood Works - Spokane, WA 99215  
Phone: (800) 367-2586

**CERTIFIED TEST REPORT**

Serial Number  
4172642

**TEST NOTES**

7075-T7351 plate 3.501-4.000" thick, if  
ultrasonically inspected, meets requirements of CMMPO25 per  
SDR CMMPO25-KaiserT-3. 7075-T7351 plate 4.001-5.000" thick,  
if ultrasonically inspected, meets requirements of CMMPO25  
per  
SDR CMMPO25-KaiserT-2.

Metal represented by this test report was immersion  
ultrasonically tested from one side and meets the Class A  
and Class B requirements of all specifications referenced  
on this test report.

**CERTIFICATION**

KAISER ALUMINUM FABRICATED PRODUCTS, LLC (KAISER) HEREBY CERTIFIES THAT METAL SHIPPED UNDER THIS ORDER WAS MELTED IN THE UNITED STATES OF AMERICA OR A QUALIFYING COUNTRY PER DFARS 225.872-1(a), WAS MANUFACTURED IN THE UNITED STATES OF AMERICA, AND MEETS THE REQUIREMENTS OF DFARS 252.325 FOR DOMESTIC CONTENT, THIS MATERIAL HAS BEEN INSPECTED, TESTED, AND FOUND IN CONFORMANCE WITH THE REQUIREMENTS OF THE APPLICABLE SPECIFICATIONS AS INDICATED HEREIN. ALL METAL WHICH IS SOLUTION HEAT TREATED COMPLIES WITH AMS 2772. ANY WARRANTY IS LIMITED TO THAT SHOWN ON KAISER'S STANDARD GENERAL TERMS AND CONDITIONS OF SALE. TEST REPORTS SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF KAISER ALUMINUM FABRICATED PRODUCTS, LLC LABORATORY. THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTIRE ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW. ISO-9001:2000 CERTIFIED.

**BILL POYNOR, LABORATORIES SUPERVISOR**

